What is claimed is:

1   1.   A method of producing a representation of a streaming media data at a

2   caching proxy server, the method comprising:

3   transmitting a request for streaming media data to be delivered to the

4   caching proxy server;

5   transmitting a request for data associated with the streaming media

6   data, the request including an identifier which represents one of several

7   possible types of data associated with the streaming media data;

8   receiving the streaming media data and storing the streaming media

9   data on a storage device which is capable of being controlled by the caching

10   proxy server; and

11   receiving the data associated with the streaming media data in a body of

12   a packet.

1   2.   The method of claim 1, wherein the data associated with the streaming

2   media data comprises a RTP Meta-Information payload format which includes

3   a field header to identify the streaming media data associated with the request,

4   and a field body to include the streaming media data.

1 3.   The method of claim 2, wherein the field header is a standard field

2 header including a first bit identifying type of the field header, a field name

3 identifying type of the streaming media data, and a field length.

1 4.   The method of claim 2, wherein the field header is a compressed field

2 header including a header type identifier, a field ID, and a field length.

1 5.   The method of claim 2, wherein the field header is a combination field

2 header which includes a standard field header coupled to a compressed field

3 header.

1 6.   The method of claim 1, further comprising placing streaming media data

2 in body of an RTP data packet.

1 / 7.   A method for operating a caching proxy server comprising:

2   sending a request for streaming media data to a server, the request

3 including a request for data associated with the streaming media data, the

4 request including an identifier which represents one of several possible types of

5 data associated with the streaming media data;

6   receiving a response from the server indicating support for the requested

7 streaming media data;

8   informing the server to send the supported data associated with the

9   streaming media data;

10   receiving the streaming media data from the server in a body of a packet;

11   receiving a request from the client to send streaming media data; and

12   sending the requested streaming media data to the client.

1   8.   The method of claim 7, wherein the data associated with the streaming

2   media data comprises a RTP Meta-Information payload format which includes

3   a field header to identify the streaming media data associated with the request,

4   and a field body to include the streaming media data.

1   9.   The method of claim 8, wherein the field header is a standard field

2   header including a first bit identifying type of the field header, a field name

3   identifying type of the streaming media data, and a field length.

1   10.   The method of claim 8, wherein the field header is a compressed field

2   header including a header type identifier, a field ID, and a field length.

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1   11.   The method of claim 8, wherein the field header is a combination field

2   header which includes a standard field header coupled to a compressed field

3   header.

1   12.   The method of claim 7, wherein the sending the streaming media data to

2   the client further includes appending header fields of a data packet header

3   before sending streaming media data to the client.

1   13.   The method of claim 12, wherein, appending comprising stripping of

2   name and ID of the data packet header.

1 / 14.   A method of negotiating for various types of streaming media data by

2   the server comprising:

3   receiving a request for one or more types of streaming media data from a

4   caching proxy server or a client, the request including a request for data

5   associated with the streaming media data, the request including an identifier

6   which represents one of several possible types of data associated with the

7   streaming media data;

8   determining if requested types of streaming media data are supported

9   by the server; and

10   responding to the request with a response to indicate the capability of

11   the server to support the request, wherein the response is in a body of a packet.

1   15.   The method of claim 14, wherein the data associated with the streaming

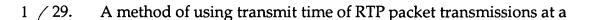2   media data comprises a RTP Meta-Information payload format which includes

3   a field header to identify the streaming media data associated with the request,

4   and a field body to include the streaming media data.

1   16.   The method of claim 15, wherein the field header is a standard field

2   header including a first bit identifying type of the field header, a field name

3   identifying type of the streaming media data, and a field length.

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1   17.   The method of claim 15, wherein the field header is a compressed field

2   header including a header type identifier, a field ID, and a field length.

1   18.   The method of claim 15, wherein the field header is a combination field

2   header which includes a standard field header coupled to a compressed field

3   header.

1   19.   A method of negotiating for various types of streaming media data by

2   the caching proxy server comprising:

3.   sending a request for one or more types of related or unrelated

4   streaming media data to a server, the request including a request for data

5   associated with the streaming media data, the request including an identifier

6   which represents one of several possible types of data associated with the

7   streaming media data;

8   receiving a response in a body of a packet to each requested type of

9   streaming media data; and

10   deciding whether to proceed or terminate negotiation process associated

11   with streaming media data.

1   20.   The method of claim 19, wherein the data associated with the streaming

2   media data comprises a RTP Meta-Information payload format which includes

3   a field header to identify the streaming media data associated with the request,

4   and a field body to include the streaming media data.

1   21.   The method of claim 20, wherein the field header is a standard field

2   header including a first bit identifying type of the field header, a field name

3   identifying type of the streaming media data, and a field length.

1   22.   The method of claim 20, wherein the field header is a compressed field

2   header including a header type identifier, a field ID, and a field length.

1   23.   The method of claim 20, wherein the field header is a combination field

2   header which includes a standard field header coupled to a compressed field

3   header.

1   24.   A method of frame thinning by caching proxy server comprising:

2   receiving a message from a client, the message indicating a need to thin

3   streaming media data being sent to the client;

4   evaluating priority of streaming media data; and

5   sending only selected streaming media data in a body of a packet.

1   25.   The method of claim 24, wherein the data associated with the streaming

2   media data comprises a RTP Meta-Information payload format which includes

3   a field header to identify the streaming media data associated with the request,

4   and a field body to include the streaming media data.

1   26.   The method of claim 25, wherein the field header is a standard field

2   header including a first bit identifying type of the field header, a field name

3   identifying type of the streaming media data, and a field length.

1   27.   The method of claim 25, wherein the field header is a compressed field

2   header including a header type identifier, a field ID, and a field length.

1   28.   The method of claim 25, wherein the field header is a combination field

2   header which includes a standard field header coupled to a compressed field

3   header.

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1 / 29.   A method of using transmit time of RTP packet transmissions at a

2   caching proxy server the method comprising:

3   requesting data corresponding to transmit time for streaming media data

4   from a server;

5   receiving the streaming media data corresponding to transmit time

6   information from the server in a body of a packet;

7   storing the received information; and

8   transmitting from the caching proxy server to a client the streaming

9   media data at times specified by the transmit time.

1   30.   The method of claim 29, wherein the data associated with the streaming

2   media data comprises a RTP Meta-Information payload format which includes

3   a field header to identify the streaming media data associated with the request,

4   and a field body to include the streaming media data.

1   31.   The method of claim 30, wherein the field header is a standard field

2   header including a first bit identifying type of the field header, a field name

3   identifying type of the streaming media data, and a field length.

1   32.   The method of claim 30, wherein the field header is a compressed field

2   header including a header type identifier, a field ID, and a field length.

1   33.   The method of claim 30, wherein the field header is a combination field

2   header which includes a standard field header coupled to a compressed field

3   header.